

REMARKS

Entry of this Amendment is proper under 37 C.F.R. § 1.116, because the Amendment places the application in condition for allowance for the reasons discussed herein; does not raise any new issue requiring further search and/or consideration, because the amendments amplify issues previously discussed throughout prosecution; no new claims are added; and places the application in better form for an appeal should an appeal be necessary. The Amendment is necessary and was not earlier presented because it is made in response to arguments raised in the final rejection. Entry of the Amendment, reexamination, and further and favorable reconsideration of the subject application in light of the following remarks, pursuant to and consistent with 37 C.F.R. § 1.116, are thus respectfully requested.

1. Status of the Claims

The status of the claims following entry of the amendment is as follows:

Claims canceled:	2-6, 8, 10, 14, and 18-20
Claims pending:	1, 7, 9, 11-13, 15-17, and 21-22
Claims rejected:	1, 6-13, and 15-22
Claims amended:	1, 7, 9, 11, and 21

2. Support for the Amendments

Support for the amendments of claims can be found at least from (1) original claims 5-6, 8, 10, and 14 (now canceled); and (2) the Specification, paragraph bridging pages 28-29.¹ Accordingly, Applicants do not believe that any prohibited new matter is being introduced by the entry of the amendments.

The claims have been amended without prejudice to, or disclaimer of, the canceled subject matter. Applicants reserve the right to file a continuation or divisional application on any subject matter canceled by way of amendment.

¹ “Note that, the number of amino acids that are deleted, substituted, inserted and/or added is not particularly limited. However, for example, *1 to 20 amino acids*, preferably 1 to 10 amino acids, more preferably 1 to 7 amino acids, further preferably 1 to 5 amino acids, and particularly preferably 1 to 3 amino acids are substituted, deleted, inserted, and/or added.” (emphasis added)

3. Information Disclosure Statement

Applicants appreciate the Office's acknowledgement of the Information Disclosure Statement filed May 13, 2010.

4. Allowable Subject Matter

Applicants appreciate the Office's acknowledgement that nucleic acid sequences encoding the proteins comprising the amino acid sequences of SEQ ID NOS: 1, 3, and 5 are free of prior art. Office Action, page 6.

5. Summary of Telephonic Interview

Applicants appreciate the telephonic interview conducted on September 15, 2010 between the Examiner and Applicants' representatives. During the interview, the Examiner indicated that nucleic acids encoding the proteins comprising the amino acid sequences of SEQ ID NOS: 1, 3, and 5 are free of the art.

6. Withdrawn Objections and Rejections

Rejections and objections not reiterated stand withdrawn. *See* 37 C.F.R. § 1.113(b); M.P.E.P. §§ 706.07 and 707.07(e).

7. Rejection Under 35 U.S.C. § 102(b)

The Office maintains the rejection of claims 1, 6-13, and 15-22 under 35 U.S.C. § 102(b) as allegedly anticipated by **Mukerji** et al., WO 99/64616 ("Mukerji").

Mukerji allegedly discloses the following:

- 1) arachidonic-containing plants are generated by transforming plants with genes from *Mortierella alpina*,
- 2) the genes are present in recombinant expression vectors;
- 3) the genes may include $\Delta 5$ desaturase, fatty-acid-chain elongase, and $\Delta 6$ desaturase;
- 4) the genes are operable linked with a seed-specific promoter;

- 5) compositions comprising arachidonic acid may be extracted from the plants;
- 6) additional nucleic acid sequences, such as sequences inhibiting $\Delta 15$ desaturase expression, may be transformed into the plants to improve arachidonic acid production; and
- 7) arachidonic acid may be produced from plant parts or the offspring of the transformed plants.

Office Action, pages 5-6.

Applicants traverse the rejection to the extent it applies to the amended claims. For prior art to anticipate a claim, the reference must disclose each and every element of the claim explicitly or inherently. *See, e.g., In re Rijckaert*, 9 F.3d 1531, 1534, 28 U.S.P.Q.2d 1955, 1957 (Fed. Cir. 1993). Mukerji fails to disclose each and every claim element and therefore cannot anticipate the claims as amended.

Claim 1 as amended recites, *inter alia*, an arachidonic acid-containing plant expressing at least $\Delta 6$ desaturase, fatty-acid-chain elongase, and $\Delta 5$ desaturase, each of which has the claimed sequence. Mukerji discloses a transgenic plant that (1) expresses a $\Delta 5$ -desaturase gene, and (2) is capable of producing arachidonic acid. *See* Mukerji, Example 3, pages 22-23, and Table 1, page 25. However, Mukerji fails to describe any fatty-acid-chain elongase gene. Thus, Mukerji cannot disclose a plant expressing all three recited genes— $\Delta 6$ desaturase, fatty-acid-chain elongase, and $\Delta 5$ desaturase. Accordingly, Mukerji fails to disclose each and every element of claim 1.

Given the above arguments, claim 1 as amended is novel. Dependent claims 7, 9, 11-13, 15-17, and 21-22 are likewise novel. Claims 6, 8, 10, and 18-20 are canceled, mooted the rejection. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of the claims.

CONCLUSION

In view of the above arguments and amendments to the claims, Applicant submits that the claims are in condition for allowance and respectfully request reconsideration and timely allowance of the claims.


Should the Office have any questions or comments regarding Applicant's amendments or response, please contact Applicant's undersigned representative at (202) 230-5119. Furthermore, please direct all correspondence to the below-listed address.

In the event that the Office believes that there are fees outstanding in the above-referenced matter and for purposes of maintaining pendency of the application, or for Notice of Appeal, the Office is authorized to charge the outstanding fees to Deposit Account No. 50-0573. The Office is likewise authorized to credit any overpayment to the same Deposit Account Number.

Respectfully Submitted,

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By: _____


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